



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|----------------------------|------------------------|
| 10/782,193 | 02/19/2004 | Hyo-Sun Hwang | 678-1249 | 4103 |
| 66547 7590 .06/29/2007 THE FARRELL LAW FIRM, P.C. 333 EARLE OVINGTON BOULEVARD SUITE 701 UNIONDALE, NY 11553 | | | EXAMINER CHANG, RICHARD | |
| | | | ART UNIT 2616 | PAPER NUMBER |
| | | | MAIL DATE 06/29/2007 | DELIVERY MODE PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/782,193

Applicant(s)

HWANG ET AL.

Examiner

Richard Chang

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 1/22/07, 8/7/06, 7/29/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patent No. 6,574,195 B2 ("Roberts") in view of US patent application publication No. 6,216,167 B1 ("Momirov").

Regarding Claims 1 and 6, Roberts teaches a packet transmission method and device with an improved quality of service based upon micro-flow state information management comprising of

receiving Quality of Service (QoS state) information (See Fig. 5, Col. 12, line 65 to Col. 13, line 52) and data rate (as guaranteed rate) information (See Col. 5, lines 33-52) from an upper layer (as from network and transport layers) and receiving channel status information of network user equipment from a lower layer (as from physical layer 515) (See Fig. 5, Col. 12, lines 21-34), and

creating an aggregation packet according to the information received from upper and lower layer (construct micro-flow data packet from packets meets QOS, path and rate policy) (See Fig. 6, step 645, Col. 15, lines 31-50).

Roberts teaches substantially all the claimed invention but did not disclose expressly the particular application involving limitations of "wireless stations" It is obvious that the network user equipment includes the well established wireless stations since the network line interface to physical layer taught by Roberts cover all user type interfaces (See Fig. 5, Col. 12, lines 21-34).

Roberts teaches substantially all the claimed invention but did not disclose expressly the particular application involving limitations of

"transmitting the created aggregation packet to a Media Access Control (MAC) layer".

Momirov teaches a similar packet transmission method and device for efficient path based forwarding and multicast forwarding wherein a packet with inserted forwarding control information is transmitted to a Media Access Control (425) (See Fig. 4, Col. 7, lines 9-34).

At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to combine Momirov with Roberts in order to obtain a packet transmission method and device with an improved quality of service based upon micro-flow state information management and for efficient path based forwarding and

multicast forwarding and to take advantage of inserting a packet with forwarding control information and transmitting to a Media Access Control layer to efficiently forward multicast data from a source port to one or more destination ports of a networking device.

Regarding claims 2 and 7, Roberts further teaches more steps and means for constructing packets stored in a Queue (storage blocks) in a form of a parameter according to channel status information (user physical layer information) and data rate information (guaranteed rate information) and creating grouped packets using the constructed packets by QOS and rate information and construct the aggregation packet according to a predetermined aggregation method (constructed corresponding to layer information collected) (See Fig. 5, Col. 12, line 65 to Col. 13, line 52)

Regarding claims 3 and 8, Roberts further teaches that the packets having the same QoS information are grouped in one packet group (See Fig. 2, Col. 6, lines 42-59).

Regarding claims 4 and 9, Momirov further teaches that the predetermined aggregation method is set to a multicast aggregation method for packets for multiple port associated multicast group (See Col. 2, lines 36-52).

Regarding claims 5 and 10, Roberts further teaches that the aggregation packet includes a control information field and a plurality of data fields (See Fig. 6, Col. 15, lines 9-30).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Chang whose telephone number is (571) 272-3129. The examiner can normally be reached on Monday - Friday from 8 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing Chan can be reached on (571) 272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

rc

rkc

Richard Chang
Patent Examiner
Art Unit 2616

Wing Chan
6/25/07
WING CHAN
SUPERVISORY PATENT EXAMINER